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Multihandicapped Needs Assessment Meeting

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American Printing House for the Blind
April 27-28, 1978

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The purpose of the Multihandicapped Needs Assessment Meeting (MHNA) was to identify priority areas of educational materials development efforts for the multihandicapped visually impaired student (MHVI). Priority areas were determined for the developmentally young MHVI student as well as for the higher functioning MHVI student. Within each priority area, specific materials were suggested. The priority areas for the developmentally young MHVI child are:

- A. Low Vision Kit
- B. Sensory integration
- C. Fine motor
- D. Self help
- E. Communication
- F. Cognitive skills

Priority areas for the higher functioning MHVI student follow:

- A. Prevocational/work training skills
- B. Leisure time use
- C. Socialization/human sexuality
- D. Self help
- E. Communication
- F. Teacher made materials

Specific materials identified for each of the above priority areas are explained in detail on the following pages.

Educational Materials Suggestions

Developmentally Young Student

MHNA - Group A

I. Low Vision

A. Low Vision Kit

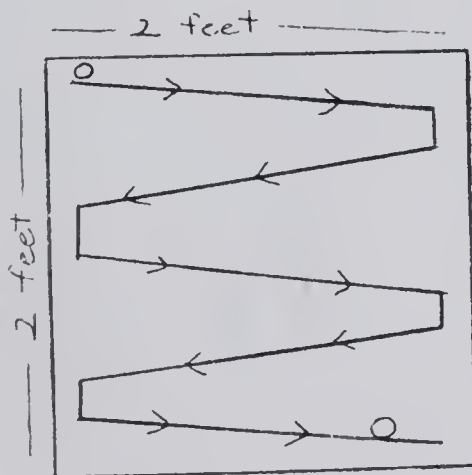
A kit of sequentially developed materials (objects and activity cards) for improving residual vision in the MHVI child. Suggestions of specific items included florescent picture book, wind-up car with light, black light and objects, unbreakable mirror, clown matching games, and other materials for developing matching, figure-ground and tracking skills.

B. Kaleidoscope

A kaleidoscope with a built in light source using only simple bright colors, Have several inserts to vary the number or combination of colors and a large hole to look into.

C. Tracking Device

A device made of wooden racks able to hold various sizes of balls (tennis balls to marbles). Perhaps slides could be changeable to different angles so as child's tracking vision improves the speed the ball travels can change (quicken).



Consider:

1. lights
2. motorized conveyor belt
3. ladders for sides for easy adjusting

D. Fine Visual Motor Sequential Activities

A set of raised line/dark line activities that are sequential in difficulty (adapt Frostig) and in tracing skills. This should be in workbook form with removeable pages.

II. Sensory

A. Time Bomb

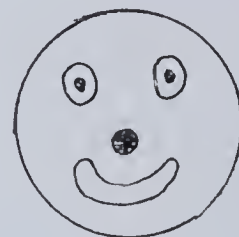
A ball made of hard, light plastic about the size of a bowling ball, that when wound would tick, with the ticks becoming slower and ending with a "booming" sound.

B. Modified Goal Locator

Inside the body of a stuffed teddy bear or dog would be an interesting sound source with variable sustained sounds.

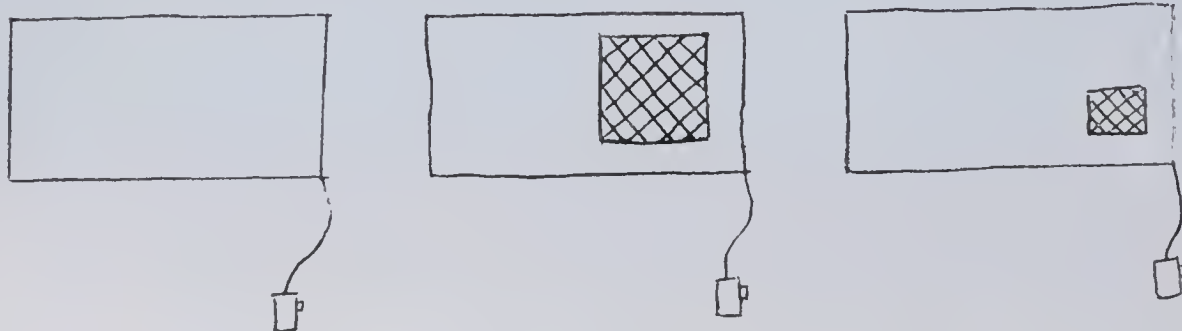
C. Auditory Nerf Ball

This nerf ball would have an internal sound source which is activated and de-activated by the child's squeezing. The ball could be decorated with a clown's face or other cute, fun figure.



D. Musical Mats

This item would consist of three 2' x 3' mats--each one connected to a small radio. On the first mat, the radio turns on, if the child touches or rolls onto it. The second one plays only if the child touches a large specified area. The third plays only if the child touches a small (5" square) area.



III. Fine Motor

A. Fit-together Blocks

This is a kit of colorful, wooden blocks about 2" x 2 1/2" that fit together in a variety of ways: snap, hook, groove, velcro, nut and bolt, magnetic, kitchen cabinet type, cotter pin, etc. Each set would include 10 to 12 blocks.

B. Sorting Box

A yellow box (8" cube) with several tops that fit on securely, in such a way that the child cannot remove them himself. Each top has different holes (1) one 4" hole (2) one 2" hole, (3) a 1 1/2" square and 1 1/2" circle holes (4) small slit. Box contains 1 1/2" blocks, squares, circles, and flat discs (10 of each) and a bell rings each time a block is dropped in the box.

C. Developmentally Sequenced Arts/Crafts Activities

A low level preschool book of activities and some accompanying materials.

D. Sorting Boxes

A center box 7" x 9" x 5" attached to four removeable boxes 5" x 7" x 3", which attach to each other and to the center box. Each box has a grossly different outside texture.

E. Adaptations of Puzzles

Some of the recommendations were:

- 1) more knob puzzles
- 2) more raised puzzles (puzzle pieces higher than background)
- 3) deeper puzzles
- 4) highly contrasted indented areas
- 5) knob puzzles with removeable knobs

- 6) more realistic puzzles (i.e. dog separates into head, body, legs, tail, etc).

F. Pull and Push

Sets of suction-cupped toys in various sizes, shapes and textures, with good suction, for grasping and pulling--the larger ones to be used on floor or wall for relays.

G. Mylar Frame

A plastic frame of approximately 18" x 18" fitted with a roller for Mylar paper to allow for ongoing work space and observation of progress.

IV. Self Help

A. Sequential Dressing Skills

This would include several child-sized vests with large buttons, large zippers, large snaps, and large hooks. This item would also include a sequential chart of dressing skills with task analysis.

V. Communication Skills

A. Picture Cards for Language Development

A set of cards (5" x 8") with very simply drawn black and white pictures. This set is to be used with existing language program where picture cards are too distracting for low vision children.

B. Portable Communication Tape Recorder

A lightweight, small, portable communication system able to be programmed for a specific child--five buttons--possible language, e.g., "I want to eat," "I want to rest," etc.

VI. Cognitive

A. Heavy Duty Picture Books

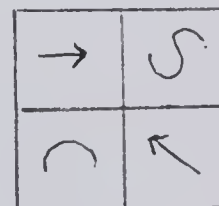
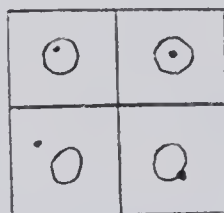
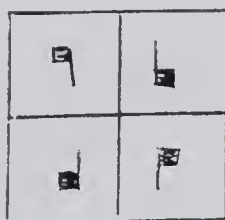
A set of spiral bound books (approximately 6" x 6" or 8" x 8") with heavy cardboard pages and simple, colorful pictures.

B. Concept Kits

A kit or kits of people, stores, parks, houses, airport, farm, etc. of a scaled size and lightweight material. It should have people with flexible bodies, use true colors and have textural differences.

C. Discrimination and Matching Games

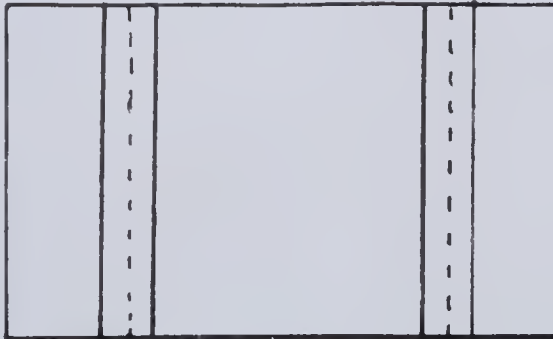
A master card and matching relief picture cards that fit in each section. Each box has a locking system different from the others and boxes should be stackable.



Educational Materials Suggestions
for Prevocational Students
MHNA - Group B

I. Work Training/Practice

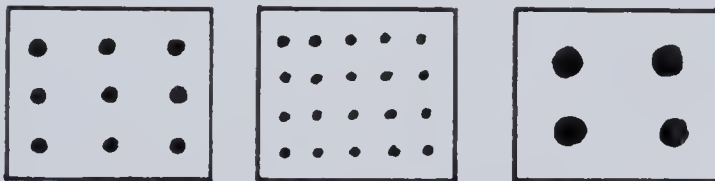
A. Letter Folding Jig



napkin size
letter size
towel size
etc.

Designed to enhance production/functional capabilities of physically handicapped, spastic, and multihandicapped students. Material to be folded is placed on the jig and hinges are folded.

B. Counting Jig



jig holes can be of different
sizes, depending on size of
object being counted

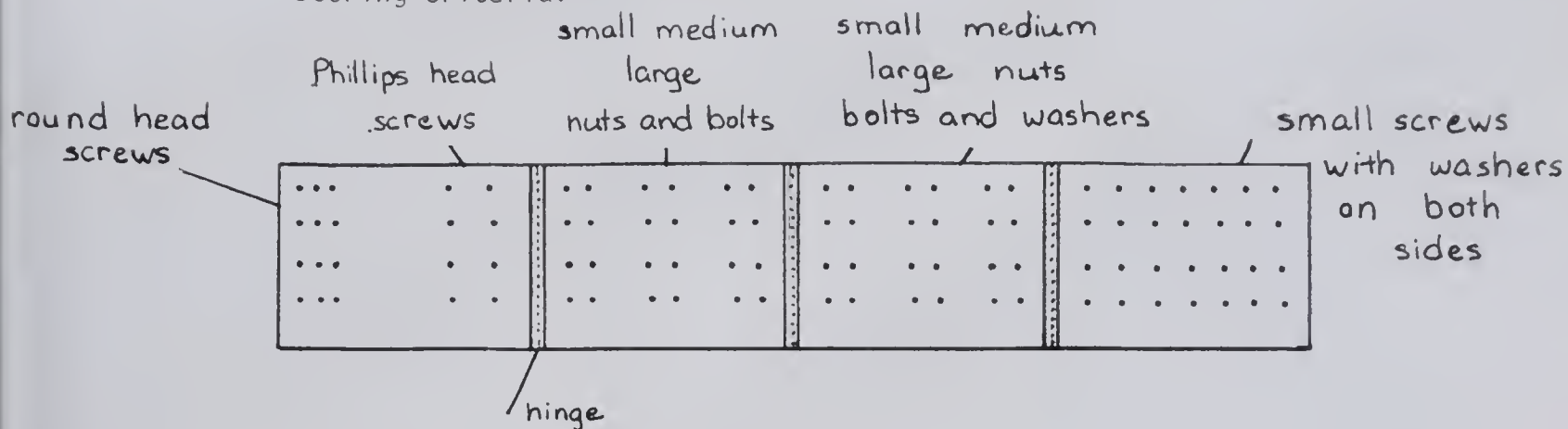
Designed to provide a "short cut" method of counting materials to be packaged for low-functioning deaf/blind children who have no counting skills. The objects being packaged are placed, one by one, in the jig holes; when all holes have been filled, the student has the proper number of objects for packaging.

C. Conveyor Belt

Designed for all functional levels, it would provide practice in assembly line tasks. Should be adjustable speed and adapt to a classroom table or some easily contrived stand (i.e., a table turned upside down). Resource: Pine Rest Rehabilitation Center, Grand Rapids, Michigan.

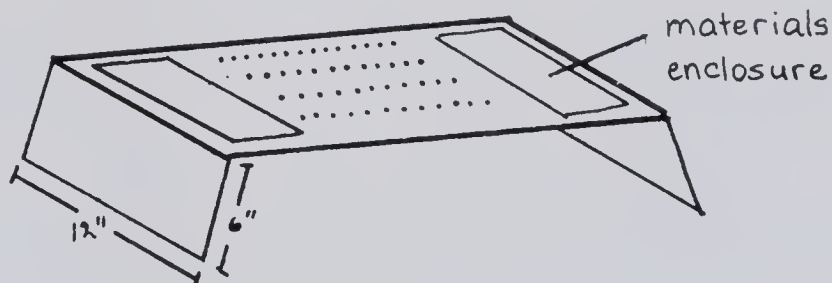
D. Test of Gross/Fine Motor Skills and Finger/Hand Dexterity

Designed for students ages 16 through adulthood functioning at a developmental level of at least 8 years. Include teacher manual and scoring criteria.



E. Task Table for Sorting and Sequencing

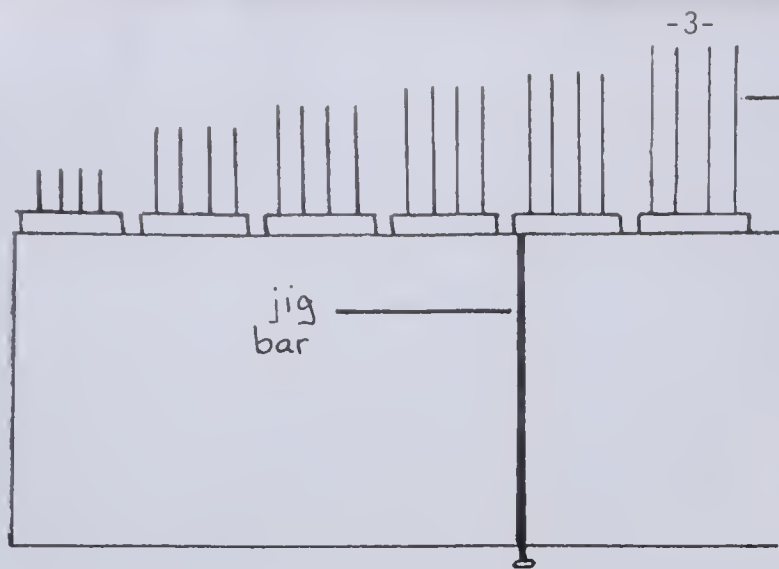
Designed for MHVI students, it's purpose is to develop sorting and sequencing skills. The table would provide an elevated surface for the child to assemble nuts and bolts above and below the table.



It may be possible to adapt Minnesota Rate of Manipulation Test (American Guidance Service Catalog).

F. Measuring Jig

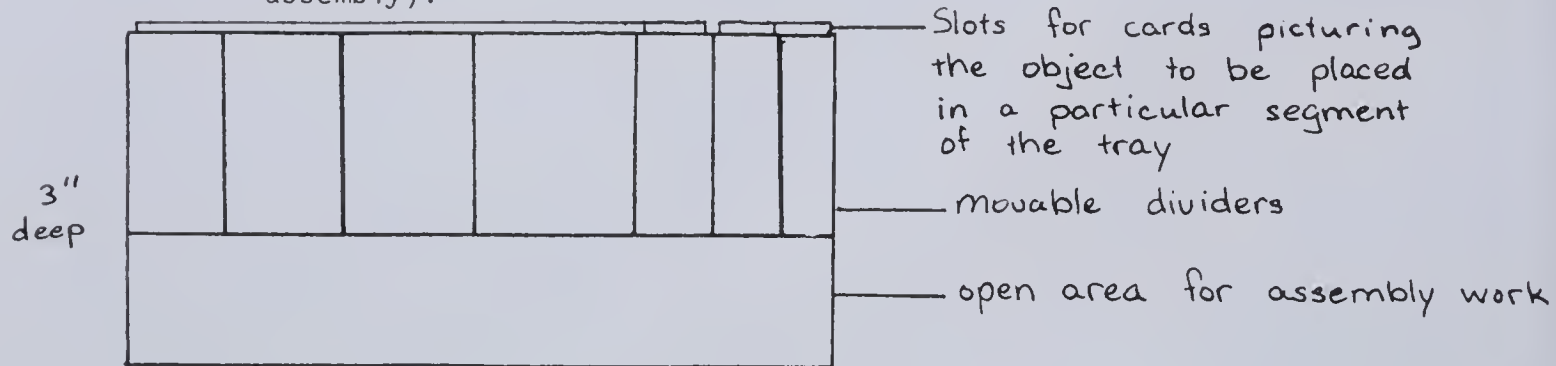
Designed for MHVI students with no knowledge of mathematics, it would provide them with a way to measure materials for production. (used in conjunction with paper cutter--1 possibility)



A standard is chosen and placed on the jig. The movable jig bar is set at the desired length and locked into position. Materials to be measured are placed on the jig.

G. Task Tray

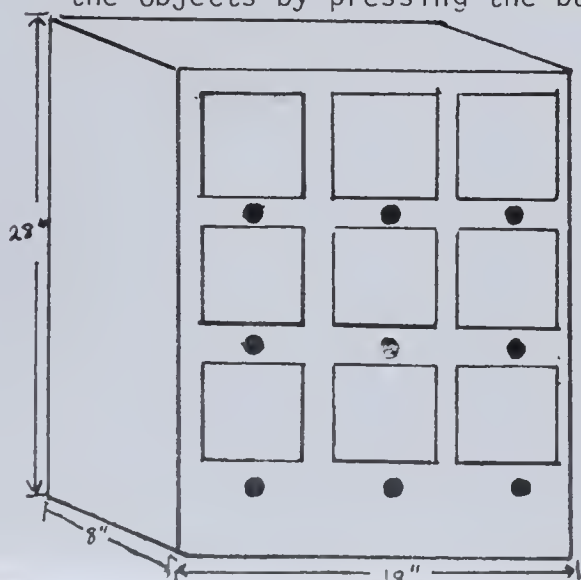
A segmented tray to be used in developing motor, sequencing and matching skills. It would be useful in assembly tasks (flashlight, hair roller assembly).



II. Leisure

A. Motor Match Game

Designed to develop matching and motor skills, level of visual utilization and serve as a motivator. Child sits or stands before "box." Objects are visible through windows in the box. The child matches the objects by pressing the button below items which are the same.



If child makes correct match, the object may jump on a spring, ring bell, flashlight, etc. Objects may be changed by opening box from rear.

B. Adapted "Lite Brite"

Commercial "Lite Brite" should have bigger pegs, larger board and simpler accompanying designs of familiar objects.

C. Adapted "Etch-A-Sketch"

Place a light behind commercial "Etch-A-Sketch."

D. Adult Jigsaw Puzzle

Designed for children functioning above 8 years, several puzzles could be made. Initially puzzles would be of simple, familiar objects with tactual outlines, or textured areas. Several puzzle sizes suitable for wheelchair and table could be produced.

E. Tactual Game Board

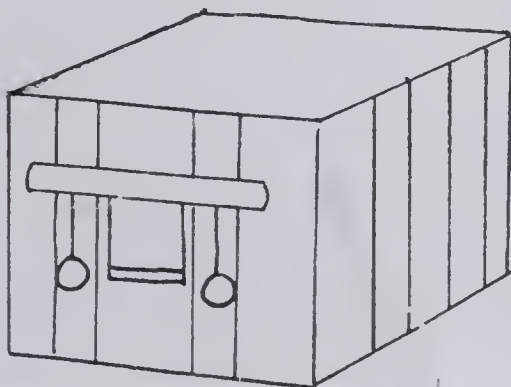
Intended for children functioning at a developmental age of 5 and up. Made with a tactual "course" yet designed so that teacher can use objects, pictures, numbers to create his/her own game. A metal board with magnetic pieces or a regular game board to fit over metal board are possibilities.

F. Morse Code

For use with adventitiously deaf and/or blind youth functioning at age 15 and above. May be considered a leisure time activity or alternative means of communication.

G. Toy "Square"

For use with all ages, a square with dowels positioned so that crib toys can hang from them. It may be placed on a table or children may be grouped around it on the floor.

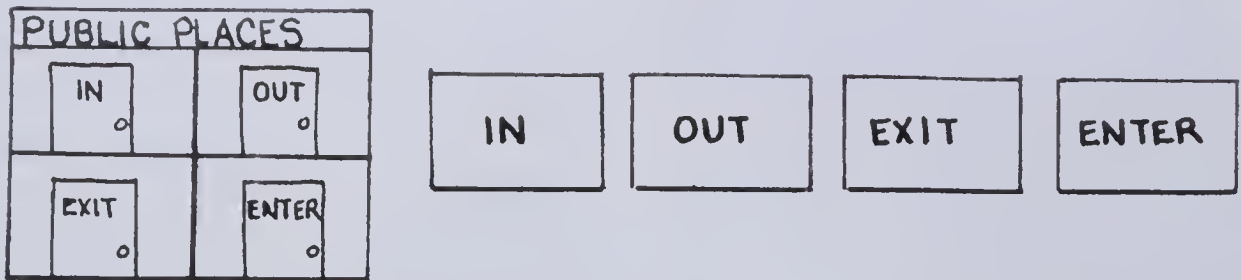


Resource: Jo Ellen Rudolph

Michigan School for the
Blind

H. Lotto Games

- For young adults, designed to help develop word recognition skills (survival words), also a leisure time activity.



Cards are placed over matching space on game board. Other suggestions for lotto boards: colors, menu, calendar, sports, safety notices.

III. Socialization/Human Sexuality

A. Social Problem Solving--Cassette series

Directed at young adult non-readers, MI, hearing and/or VI students. Brief 2 minute (or less) presentation of problem--e.g., "I was approached by a stranger." The tape would include brief questions (e.g., "What could you do? What seems best?") and after students discussed these questions, a taped solution. There is a kit for "return from an institution for mentally retarded persons produced by Edmonds, formerly of Kansas--Ohio.

B. Sex Education--cassette series

Intended for MHVI students (able to hear) who are approaching puberty or are adolescents, and function at a 6 year-old level. Tapes should be entertaining, perhaps using a "Sesame Street" approach and cartoon character voices. The tapes should include information about masturbation, body part identification and function, and attitudes about the opposite sex. Tapes should encourage appropriate heterosexual and social attitudes. Teacher manual could include outline of post-tape discussions.

C. Dolls

Intended for young adults, the dolls, complete with genitalia and secondary sex characteristics could be examined by the children. As the student handles the doll, a sexologist could talk with the student, offering information as it is needed. The dolls are handmade by Celia Stanaway. They are 14" high; there are 2 females (pregnant and nursing--baby may be "delivered") and 2 males (flacid and erect penis).

Resource: Celia Stanaway, Michigan School for the Blind, Lansing,
Michigan, Interdisciplinary Team Services

IV. Self Help

A. Pitcher with Side Spout

Designed for blind and C.P. persons who have difficulty using standard pitchers. Rubbermaid makes a 1 1/2 quart pitcher--a good size for adaptation. Include teacher manual with pouring instructions.



B. Life-size mannequins (also for Human Sexuality)

Designed for adolescents and adults of any developmental age. Students may learn body parts, their names and functions. Male and female bodies may be compared. Personal body parts, those which cannot be publically touched, may be learned. The models should be free standing, preferably with moving parts so they may be dressed by teacher and students.

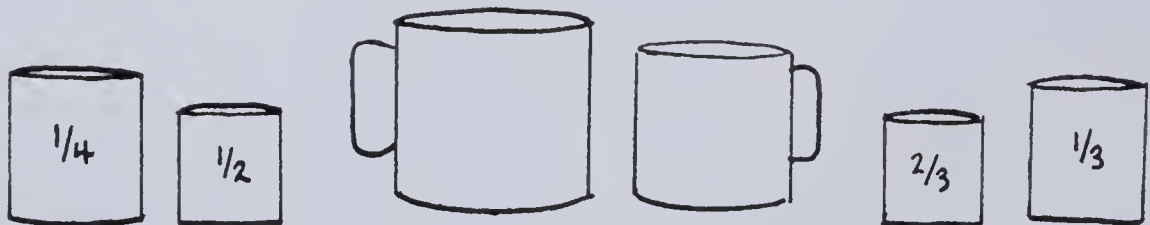
C. Cooking--Recipes on tape

Designed for students who are learning survival skills, or anyone, unable to read, who need to acquire cooking skills. The tapes would

give simple directions for fixing a variety of packaged foods (instant soup, cake mix, juice, macaroni and skillet dinners). The tapes would be indexed and a "table of contents" given at the beginning of each tape. The tapes could be separated according to type of food: dessert, canned foods, etc. A file system for locating the tape--loose leaf notebook with punched cassette holder.

D. Measuring Cup

Designed for MHVI students functioning at a 5 year level and up, there would be 2 cups, 1 with inserts for $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ cups and another with inserts for $\frac{1}{3}$ and $\frac{2}{3}$.



E. Instructions for Use of Tape Recorder

Designed for auditory learners who are beginning to develop independent skills in using a tape recorder. The taped instructions should be no longer than 15 minutes. Sentences should be simple, slow and brief. The tape should be indexed between steps for easy return and study.

Teacher materials: print copies of tape in braille

F. Large Task Analysis Poster and Cassette

Intended for children functioning at a developmental age of 6 years and above, a large 2' x 4' poster would be accompanied by a cassette. Together they would be used to promote "sequential matching of food preparation of work task." (Does this mean they would be used to help the child understand sequential activities?)

V. Communication

A. Survival Words

Intended for young adults who cannot read, survival words in raised or "set-in" print on cards approximately 5" x 8". The cards should be indestructible, safe, stackable or fit easily in an upright file.

"Danger" and "stop" should be printed in red. They may be used to play word-recognition games or to label areas. Teacher materials: games ideas, tapes for independent work.



B. Sign Book in Braille

Intended for normal blind to help them to work with deaf-blind students, pages could be thermoformed--8 1/2" x 5 1/2".

Resource People: Rusty Donahoo, Student CSULA, c/o A. Galloway

C. Enlarged Braille Letters

Designed for blind children and learning disabled blind students, large alphabet letters could be stuck on toys and objects (alphabet blocks, room doors, closets) as identifying marks. Dymotape might be used with braille dots 1/4" in diameter.

D. Survival Words for Hospital Stay

Designed for non-verbal MHVI children, these cards would be much like the previously mentioned set of "Survival Words." They would facilitate the child's hospital stay by increasing communication between child and staff.

E. Acetate Envelope

For children functioning at ages 5-21, a 9" x 11 1/2" acetate envelope, open at one end. It would allow the teacher to recycle dittos and handmade materials. The worksheet slides into the envelope and the

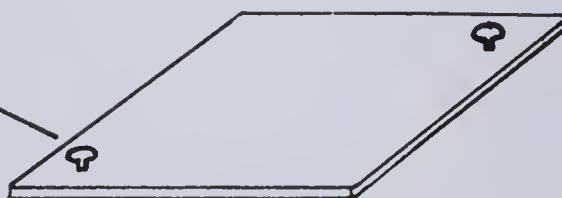
child marks on the acetate.

F. Work-Play Tray Cover

For MHVI, CP, quad, and speech handicapped students, a clear plastic plate to fit inside tray. Various materials for communication development, sequencing, matching, etc. might be placed under the cover.

These could be included as accompanying teacher materials.

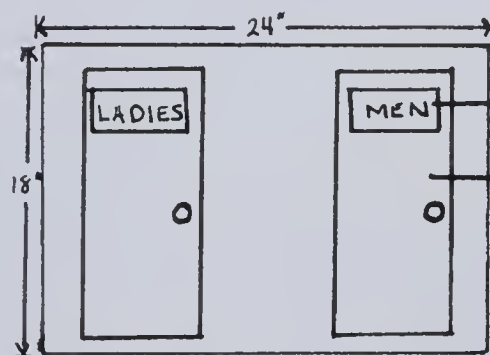
knobs for
raising and
lowering plate



G. Word Board

For MH and VH functioning from 2-0 → 30-0, a board with 2 doors.

Each door has a slot in which plates may be placed with words--universal signs, essential nouns, verbs.



removable plates

doors open, pictures
may be placed behind
the door to help children
verify their choice

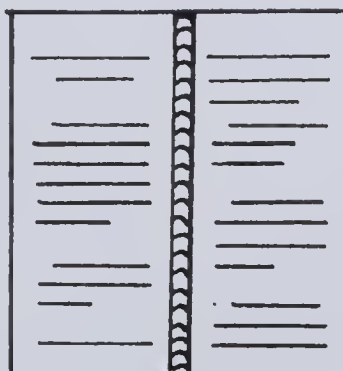
H. Plexiglas Partition

For use with all levels and with low vision students, a plexiglas sheet standing on a base. The partition is placed between student and teacher as they sit across from one another. The teacher may mark on the plexiglas, having the student follow her/his motions visually and motorically. Pictures for matching and sequencing may be placed on the partition. The teacher may place his/her mouth against the partition while vocalizing

Further Suggestions:

Adapted Large Print Book:

For children who have difficulty tracking because of poor upper trunk control yet are ready to begin pre-reading activities (functional age-- 3 years). Individual pages would be narrower than those of standard books and would be bound in a spiral binding.



"Come, Read with Me":

A series of children's stories specifically written or rewritten, for MHVI children functioning between 3-6 years of age. The series would make use of a " . . . graded vocabulary whose underlying concepts could be taught and developed by the use of appropriate tactual and visual aids." An integrated multi-sensory approach would be ideal. Dramatizing the stories would reinforce use of language. Receptive and expressive language could be encouraged by the series and related activities.

"Project Happy Talk"

A series of developmentally sequenced activities designed to:

1. build auditory (listening) skills prerequisite to the building of communication skills
2. build communication skills

The kit would include accompanying materials: 3-dimensional objects, puppets, visual representations, records and/or tapes.

It would be designed for children whose developmental levels range from 3-6 years and who have significant language delay. The visual representations contained in the kit should be simply yet realistically drawn without shading or figure-ground distractions. Three dimensional objects should match the visual representations of them; as much as possible, the objects should be realistically colored, sized, shaped, and textured.

